

REMARKS

Summary of the Office Action and Formalities

Claim Status

Claims 1-3 and 5-7 are all the claims pending in the application. Claims 1-2 are elected for prosecution and claims 3 & 5-7 are withdrawn from consideration. By this Amendment, Applicants are amending claims 1 and 2 to clarify the claim language.

Claim Objections

The Examiner objected to claims 1 and 2 because claim 1 recites “with a respective one of said electromagnetic fields.” (Office Action at page 2.) Applicants are amending claim 1 to address the Examiner’s objection.

Art Rejections

1. Claim 1 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Laurent (WO99/17334) in view of Moore (PCT/EP00/12770, US Pub. No. 2003/0097986 used as translation).

2. Claim 2 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Laurent (WO99/17334) in view of Moore (PCT/EP00/12770, US Pub. No. 2003/0097986 used as translation) as applied to claim 1 above and further in view of Schmidt (US Pub. No. 2001/0011654).

Applicants respectfully traverse.

Claim Rejections - 35 U.S.C. § 103

In rejecting claim 1, the grounds of rejection state:

Laurent teaches a method for treating at least one face (the inside surface) of a bottle in a PECVD process where microwaves (UHF waves) are used and a coupling mode is generated (abstract). A plasma-excited precursor gas is used (pg 2, lines 1520). A cylindrical microwave confinement is used within a chamber; the

coupling mode generated is a TM mode without axial components (pg 3, lines 12-15) (therefore coaxial to the produced fields).

Laurent teaches an embodiment where the method may be used with multiple containers which may be arranged in a "matrix"; in the application for multiple containers, multiple microwave confinements may be contained within one chamber (pg 3, line 30- pg 4, line 4).

Regarding the claim limitation that the chamber is sized such that a coupling mode is generated that creates several electromagnetic fields inside the chamber, Laurent teaches that "the microwave confinement, the coupling means, and the microwave generator are designed and tuned that the microwave confinement is excited in a TM resonant mode", thereby teaching the sizing of the confinement, which is linked to the chamber size (pg 3, lines 13-18), such that an electromagnetic field is generated. Since each container is in a microwave confinement, when applying the method to multiple containers, it would be inherent and/or obvious that multiple electromagnetic fields are in fact generated.

Laurent teaches all aspects of the invention except for the use of a circular vacuum chamber.

Moore teaches a process for coupling microwave energy into a circular vacuum chamber (abstract, Figure 2).

It would have been obvious to someone of ordinary skill in the art at the time of the invention to apply the use of a circular vacuum chamber, as taught by Moore as it would allow more of the chamber to be "taken over" by the substrate (Laurent, pg 3, lines 16-17) when the substrate is cylindrical, such as in the case of a bottle. Furthermore, when using the method for multiple substrates, a greater number of cylinder microwave confinements could be included in an overall chamber area that is minimized, compared to another shaped area. The definition of the arrangement of the confinements in a "matrix" allows for any distribution of the confinements. More circular per area could fit into a given circular space without additional unused area; the desire to minimize space when implementing a vacuum is well known in the art.

(Office Action at pages 3-4).

Applicants respectfully disagree. Regarding independent claim 1, Applicants submit that neither Laurent nor Moore disclose or render obvious at least “wherein a frequency of the UHF electromagnetic waves is selected and said only one chamber is sized such that a coupling mode is generated which generates a number of electromagnetic fields inside the only one chamber, and wherein a same number of containers are disposable inside said only one chamber, said-containers being disposable coaxially and respectively within one of said number of electromagnetic fields, whereby it is possible for several respective containers to be simultaneously treated in the only one chamber.”

The Examiner relies on Laurent as disclosing multiple microwave confinements within a single vacuum chamber and states that “it would be inherent and/or obvious that multiple electromagnetic fields are in fact generated.” (Office Action at page 3.) However, Laurent discloses an installation with a number of complete devices where each device includes a “microwave generator 4” individually coupled with a microwave confinement. (*See* Laurent, Page 11, lines 2-4; Page 12, lines 8-11; Figs. 5, 6.) Each microwave confinement only holds a single bottle and only generates a single microwave field. (*See* Laurent, Figs. 5, 6.) As such, each device, and therefore each microwave generator coupled to a single microwave confinement, only treats one container at a time. (*See* Laurent, Figs. 5, 6.) The multiple electromagnetic fields in Laurent are not generated by a coupling mode, but rather, by multiple microwave generators. (*See* Laurent, Figs. 5, 6.) Therefore, the recited “generat[ing] a number of electromagnetic fields inside the only one chamber” is neither inherent nor implied.

As such, Laurent does not disclose “wherein a frequency of the UHF electromagnetic waves is selected and said only one chamber is sized such that a coupling mode is generated which generates a number of electromagnetic fields inside the only one chamber.”

Further, it would not have been obvious to modify Laurent to generate a coupling mode that produces several electromagnetic fields. Even though Laurent discloses that a coupling mode is generated, Laurent does not indicate that the coupling mode generates multiple electromagnetic fields inside a chamber. Rather, Laurent indicates that “preferably a TM_{01n} mode” is implemented as shown in the publication “[Asmussen] US 5311103,” which was cited by the Examiner in the previous Office Action. (See Laurent, page 6, lines 20-24.) As Applicants previously argued, Asmussen only discloses the use of a single electromagnetic field. (See Amendment, filed January 5, 2009, pages 6-7; Asmussen, Fig. 1.) Thus, Laurent discloses the use of multiple microwave generators that each produce a single electromagnetic field to treat a single bottle. As such, there would be no reason to modify Laurent to generate a coupling mode that generates multiple electromagnetic fields.

Nor does Laurent disclose “said-containers being disposable coaxially and respectively within one of said number of electromagnetic fields.” Since Laurent does not disclose multiple electromagnetic fields generated from a coupling mode, Laurent also does not disclose that each container is coaxial with respect to one of the several electromagnetic fields generated by the coupling mode.

Moreover, Laurent does not disclose at least “said UHF electromagnetic waves being supplied through a window of a side wall of said chamber.” As shown in Figures 5 and 6 of

Laurent, the microwave generator is located at the top of each device. In contrast, independent claim 1 recites that the electromagnetic waves are supplied through a window of a side wall of the chamber.

As such, Applicants respectfully request that the Examiner withdraw the rejection of independent claim 1.

Applicants also submit that claim 2 is allowable at least by virtue of its dependency from independent claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

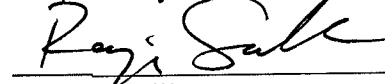
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Respectfully submitted,



Raja N. Saliba

Registration No. 43,078